

## REMARKS

Claims 1-19 continue to be the pending claims in the application.

Reconsideration of the application in light of the remarks which follow is respectfully requested.

### **Double Patenting Rejection**

Claims 1-19 stand rejected under the judicially created doctrine of obviousness-type double patenting as being allegedly unpatentable over claims 1-20 of U.S. Patent Application No. 10/766,649 and claims 1-17 of co-pending U.S. Patent Application No. 10/766,678. Applicants disagree, as discussed during the interview with the Examiner on January 10, 2006.

However, to advance prosecution of this application, Applicants provide herewith a Terminal Disclaimer disclaiming the terminal part of the statutory term of any patent granted on the present application which would extend beyond the expiration date of any patents granted on Application Nos. 10/766,649 and 10/766,678, both filed on January 27, 2004, the same day the present application was filed.

### **Claim Rejections - 35 U.S.C. § 103**

Claims 1-19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Horner Jr. et al. (U.S. Patent No. 6,365,533) in view of Ahluwalia (U.S. Patent No. 5,965,257) and Dimakis (U.S. Patent No. 5,345,738).

The Examiner contends that Horner Jr. et al. disclose a pliable facer comprising a preformed glass mat, a binder and a coating comprising fillers, surfactant and flame retarding additives and that because surfactant is present, surfactant generated microcells would also be present. The Examiner further states that Horner Jr. et al. teach that clay and antimony oxide are suitable fillers. The Examiner alleges that Horner Jr. et

al. discloses the claimed invention except for the teaching of a metallic component adhered to the coated substrate and the teaching that the substrate has an ionic charge and a coating which coats the substrate having essentially the same ionic charge. The Examiner asserts that Ahluwalia teaches a structural article that comprises a substrate having an ionic charge which is coated with a coating having essentially the same ionic charge, wherein the coating consists of a filler material and a binder material. The Examiner further asserts that Dimakis discloses a multi-functional exterior structural foam sheathing panel comprising fibrous sheets, vapor-impervious sheets, and an insulating core, wherein a metallic foil can be adhered between the core and fibrous sheet on both sides of the core via a polymeric adhesive, and wherein the foil can be aluminum foil. The Examiner then contends that it would have been obvious to have used Ahluwalia's teaching of a substrate having an ionic charge which is coated with a coating having essentially the same ionic charge on the facer material of Horner Jr. et al. and Dimakis.

### **The Claimed Invention**

Claims 1-19 relate to a composite material comprising a substrate having an ionic charge, a coating which coats the substrate having essentially the same ionic charge, and a metallic component adhered to the coated substrate wherein said coating consists essentially of a filler material comprising clay and a binder material, wherein said binder material bonds the filler material together and to the substrate and wherein said coating does not bleed through said substrate.

### **The Prior Art**

Horner Jr. et al. disclose a facer member for use in the construction industry comprising a preformed fiber mat substrate coated with a prefoamed, self-sustaining foam mixture. The facer member disclosed by Horner Jr. et al. can be used to manufacture

insulation boards comprising thermosetting or thermoplastic foam cores disposed between a pair of facer members laminated to the core surfaces. *See* Horner Jr. et al. col. 5, lines 34-39. Horner Jr. et al. teach that the coating mixture contains a thixotropic polymer latex, a surfactant, and an inorganic mineral filler, such as clay. *See* Horner Jr. et al. col. 3, lines 2-6 and lines 45-50. Horner Jr. et al. further teach that the coating mixture is obtained from a frothed or foamed emulsion, dispersion or suspension, which is prefoamed by incorporating air in the mixture, such as by blowing. *See* Horner Jr. et al. col. 4, lines 1-6. Thus the filler, which may comprise clay, taught by Horner Jr. et al. is incorporated into a prefoamed, self-sustaining coating mixture. *See* Horner Jr. et al. col. 9, lines 18-29.

Horner Jr. et al. teach that the surfactant is required to provide a foamed coating which does not penetrate through the mat. *See* Horner Jr. et al. col. 4, lines 32-34. Horner Jr. et al. further teach that the bubbles in the foam, which are introduced with air, inhibit liquid bleed through the mat. *See* Horner Jr. et al. col. 4, lines 37-39.

Horner Jr. et al. further teach that the facer members can be used as non-foil non-glare sheathings. *See* Horner Jr. et al. col. 7, lines 9-12. This is consistent with Horner Jr. et al.'s description of the prior art in which foil was used which Horner Jr. et al. describe as "leading to disruption of cell structure, delamination and warping" and as costly and thus not desirable. *See* Horner Jr. et al. col. 2, lines 20-24.

Ahluwalia teaches a structural article comprising a substrate having an ionic charge coated with a coating having essentially the same ionic charge wherein said coating consists essentially of a filler material and a binder material and wherein said binder material bonds the filler material together and to the substrate and wherein said coating does not bleed through said substrate. By coating the substrate with a coating having essentially the same ionic charge, a zero bleed through product may be produced without a need for a blowing step. *See* Ahluwalia col. 2, lines 3-6. Such a product may also be produced having a low binder content and no viscosity modifiers. *See* Ahluwalia col. 2,

lines 6-10. The filler material taught by Ahluwalia is selected from the group consisting of fly ash, calcium carbonate, ceramic microspheres and mixtures thereof. *See* Ahluwalia col. 9, lines 58-60.

Dimakis teaches an insulation panel comprising an insulating core, sandwiched between cover sheets. *See* Dimakis col. 2, lines 1-14. Sheets of foil may be provided between the core and the cover sheets to block the exchange of a blowing agent in the core and air. *See* Dimakis col. 2, 36-40, and Figs. 1 and 2.

### **There is No *Prima Facie* Case of Obviousness**

Horner Jr. et al., Ahluwalia, and Dimakis do not support a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, three criteria must be met. First, there must be some suggestion or motivation in the cited references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the combined references must teach or suggest all the claimed limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and must not be based on the Applicants disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ 2d 1438 (Fed. Cir. 1991); MPEP § 2142.

In this case, there is no suggestion or motivation in any of the cited references to alter the references to produce a composite material according to the present claims. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *See In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) (emphasis added).

Horner Jr. et al. teaches prefoamed coatings comprising a thixotropic

polymer latex, a surfactant and an inorganic filler. The filler may comprise clay. These foamed coatings can be applied to a fibrous mat because they are self-sustaining due to the presence of the surfactant. However, the fact that the coating of Ahluwalia does not bleed through the substrate is not due to the presence of a surfactant or a foamed characteristic. Rather, the coating of Ahluwalia does not bleed through the substrate because it has essentially the same ionic charge as the substrate. Furthermore, as noted above and in contrast to Horner Jr. et al., Ahluwalia achieves this without blowing. Moreover, nowhere in Horner Jr. et al. is there a teaching or a suggestion that clay would be a suitable filler for making a coating having an ionic charge that will not bleed through a substrate having the same ionic charge. And Ahluwalia and Dimakis do not provide this teaching. Therefore, it would not have been obvious to the skilled artisan to use the clay filler of Horner Jr. et al. to make the coating, *i.e.*, “a coating consisting essentially of a filler material comprising clay and a binder material”, of the present claims in view of Ahluwalia and Dimakis.

Dimakis teaches a panel having an insulating core sandwiched between cover sheets. Metallic foil may be used to block the exchange of the blowing agent and air. Such foil “may be and preferably is” interposed between the core and cover sheets. *See* Dimakis col. 5, lines 54-56 and Figs. 1 and 2. The metallic foil can also be adhered to either or both sides of the core. *See* Dimakis col. 5, lines 60-61. In contrast, as discussed during the interview with the Examiner on January 10, 2006, the presently claimed composite material comprises a metallic component adhered to the coated substrate. The combination of Horner Jr. et al., Dimakis and Ahluwalia would, at best, suggest to a skilled artisan to make an insulation panel comprising a core, layered with a metallic foil, such layered core further coated with a coating. And even if Dimakis does provide the necessary teaching to obtain a coated substrate having a metallic component adhered to it, Horner Jr. et al. teach away from the present invention. Horner Jr. et al. teach that aluminum facers are not desired because they cause disruption, delamination and warping

and because they are costly. *See* Horner Jr. et al. col. 2, lines 20-24. In addition, Horner Jr. et al. require a foamed mixture. When combining references, their teachings must be considered in their entirety. It is not appropriate to choose only the desired teaching and not that which teaches away. The skilled artisan looking to Horner Jr. et al. would not be motivated to combine it with the foil of Dimakis because Horner Jr. et al. teach that a foil facer is not desirable. Nor would the skilled artisan be motivated to combine Ahluwalia and Horner Jr. et al. as discussed *supra*, because Ahluwalia teaches that the ionic charge of the substrate and coating provides a zero bleed through product without the need for blowing, where as Horner Jr. et al. teaches a surfactant-based foamed coating that does not bleed through a substrate due to the foamed characteristic of the coating, which is obtained by introducing air, e.g. by blowing, into the coating mixture. Because Ahluwalia eliminates the need for blowing by teaching a coating and substrate having essentially the same ionic charge, the skilled artisan would not combine Ahluwalia with Horner et al., which by its nature, requires some form of blowing to introduce air into the coating. Accordingly, the skilled artisan would not be motivated to combine any of the cited references to obtain the claimed invention.

As noted above, in order for the Examiner to make out a *prima facie* case of obviousness, there must be some suggestion or motivation to modify the reference or to combine reference teachings, which, in this case, do not exist.

Therefore, Applicants respectfully request withdrawal of the rejection of the claims under 35 U.S.C. §103(a) as obvious over Horner Jr. et al. in view of Ahluwalia and Dimakis.

### **Conclusion**

In view of the foregoing amendments and remarks, Applicants submit that the present invention is now in condition for allowance. Accordingly, favorable

reconsideration of the application is earnestly solicited. Please send any further correspondence relating to this application to the undersigned attorney at the address below.

Applicants believe no fee is due in connection with this communication. However, should any fee be due in connection with this communication, the Commissioner is authorized to charge any such fee to Deposit Account No. 06-1205.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "John D. Murnane", is written over a horizontal line.

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